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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/806,822 | 03/22/2004 | Takahiro Yamada | 004553. 108039 | 7275 |
| 29540 | 7590 | 01/23/2006 | EXAMINER | |
| PITNEY HARDIN LLP | | | VO, ANH T N | |
| 7 TIMES SQUARE | | | ART UNIT | |
| NEW YORK, NY 10036-7311 | | | PAPER NUMBER | |
| | | | 2861 | |

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,822

Applicant(s)

YAMADA, TAKAHIRO

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/22/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 5, 7, 9-13 and 16-17 are rejected under 35 USC 102 (a) as being anticipated by Yamada et al. (US Pat. 6,679,595).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Yamada et al. disclose in Figures 1-3, 11-15 and 18-22 an ink jet recording apparatus comprising:

- at least one ejector unit (6) having, in one of opposite surfaces thereof, a plurality of nozzles (22) each of which ejects a droplet of ink toward a recording medium (62) (Figures 1-2);
- a cover member (44) which has at least one first opening (44a) and is fixed to said one surface of said at least one ejector unit (6) such that the nozzles of said at least one ejector unit (6) are exposed through said at least one first opening (44a) (Figure 2);
- a frame member (1) including a bottom wall (5) to which the other surface of said at least one ejector unit (6) is fixed (Figure 2-3);
- at least one sealing portion (sealer) which seals said at least one ejector unit (6 or 106) and the cover member (44 or 144) to each other along a periphery of said at least one first opening (44a or 144a) of the cover member (44 or 144) (Figures 13-14, column 1, lines 27-29);
- at least one first adhering portion (156) which adheres, and thereby fixes, the cover member (144) to said one surface of said at least one ejector unit (106), so as to provide a subassembly including said at least one ejector unit (106) and the cover member (144) (Figures 14 and 18-19);
- at least one second adhering portion (107) which adheres, and thereby fixes, the subassembly including said at least one ejector unit (106) and the cover member (144), to the bottom wall of the frame member (101), such that the other surface of said at least one ejector unit (106) is fixed to the bottom wall (105) of the frame member (101) (Figures 14 and 18-19);
- wherein the frame member (101) has at least one second opening (109 a, 109b) which is formed through a thickness of the bottom wall (105) thereof and is opposed to at least one portion of the subassembly (144, 106) in a reference direction perpendicular to the bottom wall (105), and wherein said at least one second adhering portion (107) is aligned with said at least one second opening (109a, 109b) in the reference direction (Figures 14-16 and 18-19);
- 3 wherein said at least one first adhering portion (156) comprises at least one non-alignment first adhering portion which is not aligned with said at least one second opening (109a, 109b) of

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the bottom wall (105) of the frame member (101) in the reference direction (Figure 18);

- wherein the nozzles of said at least one ejector unit (106) are provided in at least one array (122, 123), and wherein the ink jet printer head (106) comprises a plurality of said first adhering portions (156) which are provided in at least one array along at least one reference line substantially parallel to said at least one array of nozzles (122), such that the first adhering portions are arranged at a first, substantially regular interval of distance; and a plurality of said second adhering portions (107) which are provided in at least one array along said at least one reference line, such that the second adhering portions (107) are arranged at a second, substantially regular interval of distance and are mixed with the first adhering portions (156) within a predetermined range along said at least one reference line (Figures 14 and 18-19);

- wherein the nozzles (122, 123) of said at least one ejector unit (106) are provided in at least one array, and wherein said at least one first adhering portion (156) is provided along at least one reference line substantially parallel to said at least one array of nozzles (122, 123), such that lengthwise opposite ends of said at least one first adhering portion (156) are located outside lengthwise opposite ends of said at least one second adhering portion (107), respectively (Figure 18);

- wherein said at least one sealing portion (sealer) is formed of a sealing agent, and wherein said at least one first adhering portion (156) is formed of an adhesive which hardens more quickly than the sealing agent;

- a plurality of said ejector units (106), wherein the cover member (144) has a plurality of said first openings (144a) corresponding to the ejector units, respectively, and wherein said at least one first adhering portion (156) adheres, and thereby fixes, the ejector units and the cover member (144) to each other, such that the nozzles (122, 123) of each one of the ejector units (106) are positioned relative to the nozzles of the other ejector unit or units (Figures 14 and 18-19);

wherein said at least one second adhering portion (107) are formed of an ultraviolet-light sensitive adhesive which hardens upon exposure to an ultraviolet light (column 12, lines 14-16); and

- wherein the sealing portion (sealer) is formed of a sealing agent, and wherein the sealing agent

comprises a silicone adhesive (column 1, line 29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8, 14-15 and 18-20 are rejected under 35 USC 103 (a) as being unpatentable over Yamada et al. (US Pat. 6,679,595) in view of Plesinger (US Pat. 5,563,641).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Yamada et al. disclose the basic features of the claimed invention were stated above but do not disclose that said at least one first adhering portion is continuously formed on respective exposed portions of said at least one ejector unit and the cover member; a plurality of said first adhering portions which are formed in two arrays along widthwise opposite edge lines of said at least one ejector unit, such that each of the first adhering portions is continuously formed on the respective exposed portions of said at least one ejector unit and the cover member; the first adhesive hardens more quickly than the sealing agent; and at least one of the first and second adhesives comprises an ultraviolet-light sensitive adhesive that hardens upon exposure to an ultraviolet light.

Plesinger et al. disclose in Figures 3-6 an ink jet printhead comprising:

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- said at least one first adhering portion (60) is continuously formed on respective exposed portions (22) of said at least one ejector unit (20) and the cover member (54) (Figures 4-5, column 6, lines 39-41);
- a plurality of said first adhering portions (60) which are formed in two arrays (22) along widthwise opposite edge lines of said at least one ejector unit (20), such that each of the first adhering portions (60) is continuously formed on the respective exposed portions of said at least one ejector unit and the cover member (54) (Figures 4-5, column 7, lines 38-50).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Plesinger in the Yamada et al. ink jet recording apparatus for the purpose of providing an adhesive to tightly secure and hold between a printing head and a protection cover.

It has been held that a recitation "the first adhesive hardens more quickly than the sealing agent and at least one of the first adhesives comprises an ultraviolet-light sensitive adhesive that hardens upon exposure to an ultraviolet light " is the selection of a known material based on its suitability for its intended use and does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ2d 1647 (1987)*.

Citation of Pertinent Prior Art

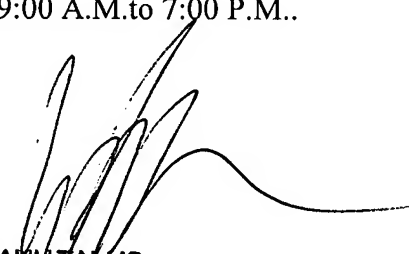
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 4,994,825; US Pat. 5,581,288; US Pat. 5,874,971; US pat. 6,079,810) cited in the PTO 892 form show an ink jet print head that is deemed to be relevant to the present invention. These references should be reviewed.

Allowable Subject Matter

Claim 4 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an ink jet print head comprising a plurality of said first adhering portions which are provided in at least one array along at least one reference line substantially parallel to said at least one array of nozzles, such that the first adhering portions are arranged at a first, substantially regular interval of distance; and a plurality of said second adhering portions which are provided in at least one array along said at least one reference line, such that the second adhering portions are arranged at a second, substantially regular interval of distance and are mixed with the first adhering portions within a predetermined range along said at least one reference line in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (571) 273-8300.



ANH T.N. VO
PRIMARY EXAMINER

January 20, 2006